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COMSPHERE 3800*Plus* Modems
U.K. Supplement
Document Number 3980-A2-GK40-10

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Overview

This document highlights government requirements, safety warnings, installation procedures, features, and functions that are unique to COMSPHERE® 3800*Plus* modems installed within the United Kingdom. This document is intended to be used in conjunction with the *COMSPHERE 3800Plus Modems User's Guide*, Document No. 3980-A2-GB30. Please consult the *User's Guide* for overall operation of the 3800*Plus* modem.

Regulatory Information

Ringer Equivalence Number

The Ringer Equivalence Number (REN) is a customer guide indicating approximately the maximum number of items of apparatus that should be connected simultaneously to the telephone line. The sum of the RENs should not exceed four. This value includes any BT-provided instrument which may be assumed to have a REN of 1 unless marked otherwise. The REN of this modem is 1.

Connection to Leased Lines

If any other apparatus, including cable or wiring, is connected between the apparatus and the point of connection to any speechband circuit, then all that other apparatus shall comply with the following:

1. The overall transmission characteristics of all that other apparatus shall be such as to introduce no material effect upon the electrical conditions presented to one another by the apparatus and the speechband circuit; and

2. All that other apparatus shall comprise only:

   (i) apparatus approved for the purpose of connection between the apparatus and a speechband circuit; and

   (ii) cable or wiring complying with a code of practice for the installation of equipment covered by this part of BS 6328 or such other requirements as may be applicable.

This modem is suitable for connection to BT circuits with signalling at a nominal frequency of 2280 Hz and may be connected to multipoint or point to point circuits. The apparatus does not require signalling or otherwise use the frequency range 0–200 Hz.

No d.c. interaction is intended between the modem and the telephone network.

This apparatus may be directly connected to a speechband circuit or connected to a relevant branch system for speechband circuits.

Connection to Supply Mains

IMPORTANT: The wires in the mains lead supplied with this equipment are coloured in accordance with the following code:

Blue — Neutral
Brown — Live

As the colours of the cores in the mains lead of this equipment may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured blue must be connected to the terminal which is marked with the colour N or coloured black.
- The core which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Safety Notice

For pluggable equipment, the mains socket outlet shall be installed near the equipment and be easily accessible.

Interconnection circuits between this modem and any other equipment should be such that the equipment continues to comply with the requirements of EN41003 for TNV (Telephone Network Voltage) circuits and EN60950 for SELV (Safety Extra Low Voltage) circuits after making connection between circuits.

The power supply must be properly connected and switched on before the modem will work correctly.

Technical Specifications

Table 1 shows technical specifications that are unique to 3800*Plus* modems installed in the United Kingdom.

Table 1
Technical Specifications for the United Kingdom

Specifications	Description
TRANSMIT LEVEL	
Leased Line	–13 dBm (factory default setting)
Dial Line	–9 dBm (factory default setting)
	These settings can only be changed by qualified AT&T Paradyne service personnel.
TELEPHONE INTERFACE	
Leased-Line Connectivity	8-position modular jack (3810*Plus* requires VF cord with BT631A-type modular plug)
	50-pin mass termination (3811*Plus*)
Dial-Line Connectivity	8-position modular jack (3810*Plus* requires VF cord with BT431A-type modular plug)
	50-pin mass termination (3811*Plus*)

Equipment List

Table 2 shows a list of modems and telephone cords available for use in the United Kingdom.

Table 2
Equipment List for the United Kingdom

Equipment	Model/Part Number
3810*Plus* 4-wire/2-wire standalone	3980-A2-303
3811*Plus* 4-wire/2-wire carrier card	3981-B1-004
8-position, 4-wire to BT631A modular cord (leased line)	035-0170-0031
8-position, 2-wire to BT431A modular cord (dial line)	035-0169-0031
6-position, 4-wire modular cord, 7-foot length	125-0067-0031
8-position, 8-wire modular cord, 14-foot length	125-0053-1431
8-position to 6-position crossover modular cord	125-0054-1531

3810*Plus* Input Voltage Requirements

The power supply used with the 3810*Plus* modem (Figure 1) is designed for an input voltage of 240 Vac (± 10 percent), and an input frequency of 50 Hz.

3810*Plus* Modem Installation

The following procedures describe how to connect the standalone modem to the leased line, dial line, and power supply.

Before installing your modem, make sure your installation site is clean and well-ventilated. Allow space around the modem for installing cables and telephone cords, and make sure the modem is located within reach of the ac power outlet. The distance between your modem and DTE should be minimized if DTE data rates exceed 19,200 bps. Also, low capacitance cables may be necessary for speeds greater than 19,200 bps or distances greater than 50 feet.

Figure 1 shows how 3810*Plus* modems are connected to certain TELCO jack types using the supplied cables.

3810*Plus* 4-wire/2-wire Leased-Line Connection

Use the following procedure to connect a 3810*Plus* to the leased-line network interface (use the VF cord labeled LEASED LINE):

1. Insert the 8-position, 4-conductor modular plug into the jack labeled LEASED (3810*Plus*), Figure 1.
2. Insert the BT631A-type modular plug into the leased-line network interface.

3810*Plus* Dial-Line Connection

Use the following procedure to connect the modem to the dial network interface (use the VF cord labeled DIAL LINE):

1. Insert the 8-position, 2-conductor modular plug into the jack labeled DIAL, Figure 1.
2. Insert the BT431A-type modular plug into the dial network interface.

Power Supply Connection

Use the following procedure to connect the standalone modem to an ac power outlet:

1. Make sure the modem's power switch is in the OFF position.
2. Insert the power supply's cylindrical connector into the modem's rear panel power receptacle (Figure 1).
3. Insert the transformer into the appropriate grounded ac outlet in accordance with requirements as stated in EN60950: ''For pluggable equipment, the socket outlet shall be installed near the equipment and shall be easily accessible."
4. Refer to the *Modem Power-Up* section in Document No. 3980-A2-GB30 for modem start-up procedures.

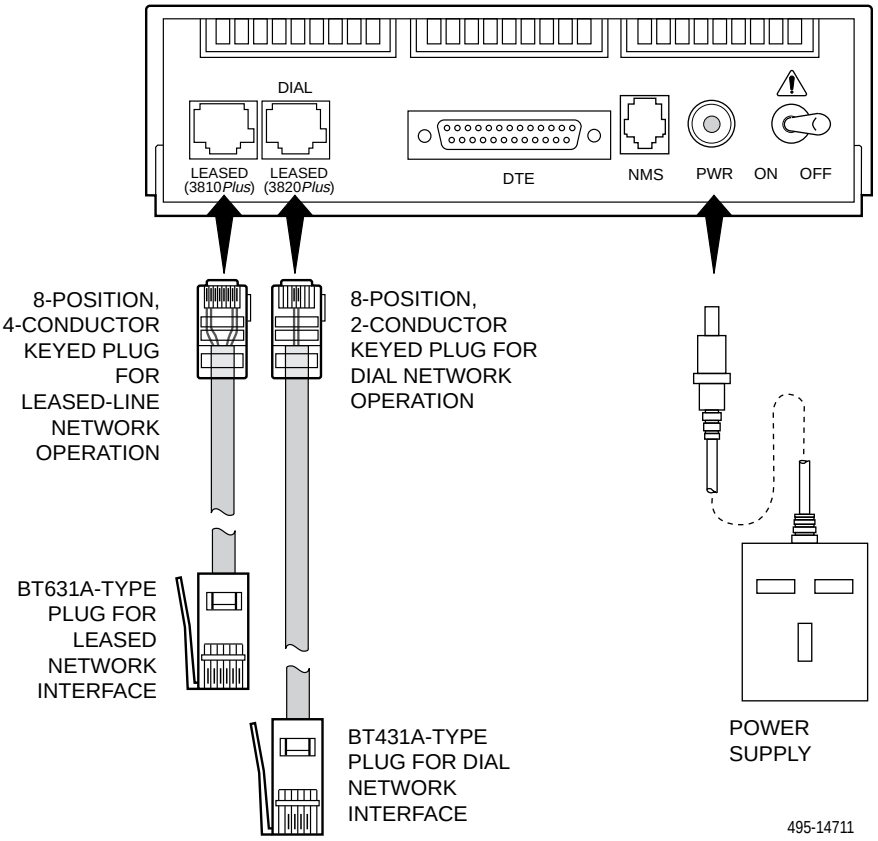

Figure 1. 3810*Plus* Rear Panel and Power Supply

3811*Plus* Modem Installation

To install the 3811*Plus* modem (carrier card) into the COMSPHERE 3000 Series Carrier, follow the same installation procedures described in the *3811Plus Modem Installation* section of Document No. 3980-A2-GB30. For correct power, DTE, dial, and leased-line cabling procedures, refer to the *COMSPHERE 3000 Series Carrier, Installation Manual*, Document No. 3000-A2-GA31.

Note that the 3811*Plus* modem supports the following features:

- Carrier assembly
  - 3000-B1-301 – COMSPHERE 3000 Series Carrier with 230 volt power transformer unit
  - 3000-B1-701 – COMSPHERE 3000 Series Carrier with 200 volt power transformer unit (Hong Kong)
- Network Interface Modules (NIMs)
  - 3000-F1-003 – RJ21X NIM without the Make Busy and Service Line feature

Configuration Options

This section lists functions and configuration options that are unique to the operation of 3800*Plus* modems installed in the United Kingdom. The information described in this section differs from what is listed in Document No. 3980-A2-GB30.

Please note that if a function or configuration option is not listed in this supplement, then your modem's functionality and operation follow what is described in Document No. 3980-A2-GB30.

Control Branch — Make Busy/Remove Make Busy Function

The Make Busy function, described in Document No. 3980-A2-GB30, is not offered in the 3810*Plus* or 3811*Plus* modems (3980-A2-404 and 3981-B1-004) for the United Kingdom. If this function is selected from the diagnostic control panel (DCP), the message **Invalid Command** appears.

Control Branch — Service Line/Disconnect Service Line Function

The Service Line function, described in Document No. 3980-A2-GB30, is not offered in the 3811*Plus* modem (3981-B1-004) for the United Kingdom. If this function is selected from the DCP, the message **Invalid Command** appears.

Configuration Tables

Tables 3, 4 and 5 describe configuration options that are different for 3800*Plus* modems installed in the United Kingdom.

Table 3
Line Dialer Configuration Options for the United Kingdom

Blind Dial Paus: 2sec **Nxt 2sec**
Blind Dial Pause. Set to 2 seconds. Read-only and cannot be changed. Only appears when Dial Tone Detect is disabled. The AT command is S6=2 and cannot be changed.
NoAnswer Timout: 45sec **Nxt 45sec 30sec 60sec**
No Answer Abort Time-out. Set to 45 seconds. The AT command is S-Register S7=*n*, where *n* is a value from 1 to 60 in 1-second increments.
Auto Make Busy: Disable **Nxt Disable**
Auto Make Busy. Set to Disable. Read-only and cannot be changed. Only appears when using 3811*Plus* modems. The AT command is S40=0 and cannot be changed.
MakeBusyVia DTR: Disable **Nxt Disable**
Make Busy Via DTR. Set to Disable. Read-only and cannot be changed. The AT command is S69=0 and cannot be changed.

Table 4
Dial Line Configuration Options for the United Kingdom

Dial Line Rate: 2400(V22bis) **Nxt 2400(V22bis) 1200(V22) 1200(212A) 0–300(V21) 0–300(103J)**
Dial Line Rate. Does not support the Bell modulation schemes of 1200 (212A) and 0–300 (103J). **NOTE:** The rates and modulations displayed for Dial Line Rate depend on the setting of the Modulation configuration option. The selection shown above is displayed when the Modulation configuration option is V21/V22/Bell. The factory default is 28800(V34). AT command for Dial Line Rate is S-Register S41=*n*, where *n* is: 6 = 2400 (V.22bis) 7 = 1200 (V.22) 10 = 0–300 (V.21)
Dial TX Level: –9 dBm **Nxt –9 dBm**
Dial Transmit Level. Set to –9 dBm. Read-only and cannot be changed. The AT commands are &I9 and &J11 and cannot be changed.
V22b Guard Tone: 1800 Hz **Nxt 1800 Hz**
V.22bis Guard Tone. Set to 1800 Hz. Read-only and cannot be changed. The AT command is &G2 and cannot be changed.

Table 5
Leased Line Configuration Options for the United Kingdom

Leased TX Level: –13 dBm **Nxt –13 dBm**
Leased Transmit Level. Set to –13 dBm. Read-only and cannot be changed. The AT command is S45=13 and cannot be changed.